Hemolytic Uremic Syndrome surveillance in FoodNet: supplemental active surveillance to monitor HUS trends

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Background: Hemolytic uremic syndrome (HUS) can be a severe consequence of *Escherichia coli* O157 infection, with a mortality rate of 3-5%. To monitor trends in HUS, the Foodborne Disease Active Surveillance Network (FoodNet) conducted surveillance for pediatric and adult cases. Active surveillance among pediatric nephrologists and infection control practitioners (ICPs) was supplemented by a review of hospital discharge data (HDD) to determine the ability of HDD review to capture pediatric and adult cases not previously reported through active surveillance.

Methods: FoodNet conducted population-based active surveillance among pediatric nephrologists and ICPs for pediatric cases (age < 18 years) of HUS, between 2000 and 2002 in 9 states. Eight FoodNet sites also reviewed HDD to identify pediatric and adult HUS cases not previously identified by active surveillance (CO completed HDD for pediatric HUS cases only).

Results: From 2000 through 2002, 367 HUS cases were identified in the 8 states that participated in HDD review and active surveillance. Of these, 241 (66%) were identified through the active surveillance network and 126 (34%) were identified through HDD. Of the 265 pediatric cases, 212 (80%) were ascertained through active surveillance and 53 (20%) were identified from HDD. HDD increased pediatric HUS case ascertainment by 25% (range: 3% in Oregon to 83% in Maryland). Of 98 adult cases, 73 (74%) were identified from HDD and 25 (26%) were ascertained through active surveillance.

Conclusion: Supplementing active HUS surveillance with HDD review is valuable for population-based pediatric HUS surveillance. Moreover, HDD review is essential for capturing a large proportion of adult HUS cases. These results demonstrate that multiple methods for population-based HUS surveillance are important for accurately monitoring and understanding HUS epidemiologic trends in the United States.